WASHINGTON STATE DEPARTMENT OF ECOLOGY

STATEMENT OF BASIS FOR NPDES PERMIT NO. WA 0040029
ALLWEATHER WOOD TREATERS

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General Information

Table 1 General information

Facility Name and Address:	Allweather Wood Treaters 725 South 32nd Street Washougal, WA 98671
Type of Facility:	Pressure Wood Preserving
Discharge Location:	Water body name: Columbia River via Gibbons Creek Outfall 001: Latitude: 45º 34' 16" N Longitude: 122º 20' 07" W
Water Body ID Number:	WA-CR-1010
NPDES Permit No. WA-0040029	Issuance Date: March 1, 2003 Effective Date: March 1, 2003 Modification Date: September 1, 2004 Expiration Date: March 1, 2008

Permit Modification Request

On August 8, 2005, the Department of Ecology (Department) received a permit modification request (PMR). On August 18, 2005, the Department requested additional information which was received on September 12, 2005. Further information was received via email on October 26, 2005.

1. The PMR is for:
   a. Copper limit modification for Outfall 001 and 002,
   b. Removal of acute toxicity testing for Outfall 001 and 002, and
   c. Extending the deadline of the engineering report until January 1, 2009.
2. Allweather is unable to comply with the current copper limits due to a voluntary decision by the wood preserving industry to move away from consumer use of chromated copper arsenate (CCA) treated lumber [residential lumber] to new alternative wood preservatives by December 31, 2003. The new alternative wood preservative used by Allweather has resulted in a higher concentration of copper in stormwater.
3. Allweather has been working to improve removal efficiency of the Outfall 001 electrocoagulation treatment system and efficiency of the best management practices (BMPs) employed at the facility. Allweather submitted an action plan and notified the

Department of its status periodically. The Department received the current status of the action plan with a request for this modification.

The Department's Tentative Determination

Outfall 001

Allweather has not been able to comply with the final water-quality-based copper limit of 36 µg/L since the permit was issued on March 1, 2003, Figure 1, Figure 2, and Figure 3. Since September 2004, Allweather violated the interim copper limit of 160 µg/L twice. Since March 2003, an average copper removal efficiency has been steady at 84 percent, or 80 percent when negative removal efficiency of -4 percent for October 2003, is used in calculation of the average removal efficiency, Table 2.

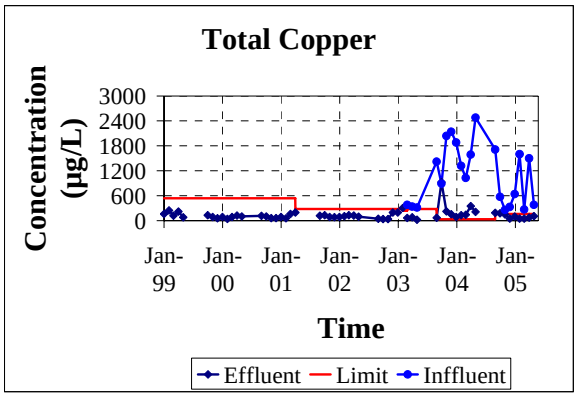

Figure 1 Effluent concentration, Jan. 1999-May 2005; influent concentration, Mar. 2003- May 2005; both at Outfall 001

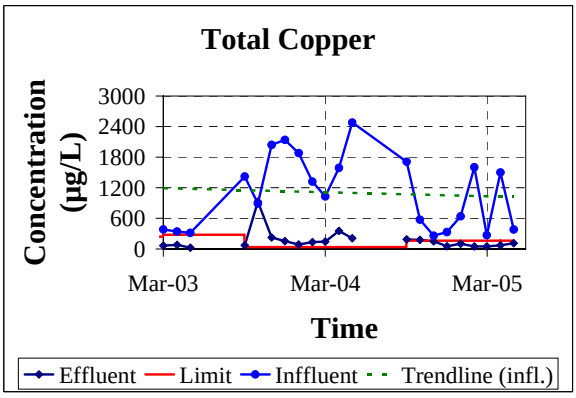

Figure 2 Influent and effluent concentration at Outfall 001, Mar. 2003- May 2005

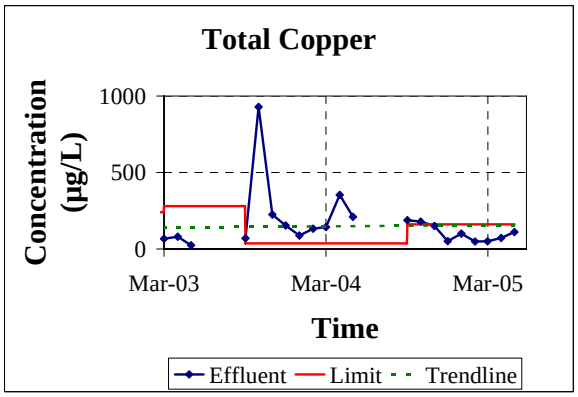

Figure 3 Effluent concentration at Outfall 001, Mar. 2003- May 2005

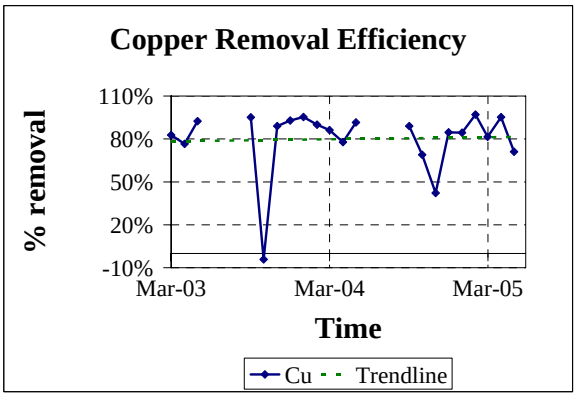

Figure 4 Copper removal efficiency at Outfall 001, Mar. 2003- May 2005

Table 2 Copper removal efficiency

Date	Total Copper (µg/L)			Removal Efficiency
	Influent	Effluent	Limit	
Mar-03	381	66	280	83 percent
Apr-03	341	80	280	77 percent
May-03	315	24	280	92 percent
Aug-03			280	
Sep-03	1,420	70	36	95 percent
Oct-03	891	928	36	-4 percent
Nov-03	2,040	224	36	89 percent
Dec-03	2,140	153	36	93 percent
Jan-04	1,880	87	36	95 percent
Feb-04	1,320	132	36	90 percent
Mar-04	1,030	143	36	86 percent
Apr-04	1,590	353	36	78 percent
May-04	2480	210	36	92 percent
Sep-04	1710	188	160	89 percent
Oct-04	573	178	160	69 percent
Nov-04	260	150	160	42 percent
Dec-04	330	51	160	85 percent
Jan-05	640	100	160	84 percent
Feb-05	1600	48	160	97 percent
Mar-05	270	50	160	81 percent
Apr-05	1500	72	160	95 percent
May-05	380	110	160	71 percent
Averages:	**1,100**	**163**		**84 percent**
				(with -4%) 80%

1. The levels of arsenic, chromium, and hexavalent chromium have continued to drop and are well below the permit limits for Outfall 001 since beginning of the 2004; Figure 5, Figure 6, and Figure 7.

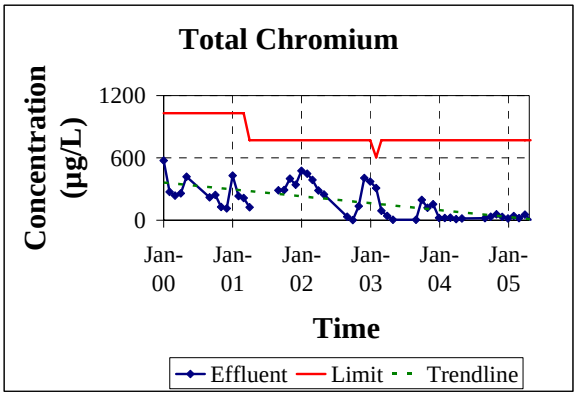

Figure 5 Effluent concentration at Outfall 001, Jan. 2000-May 2005

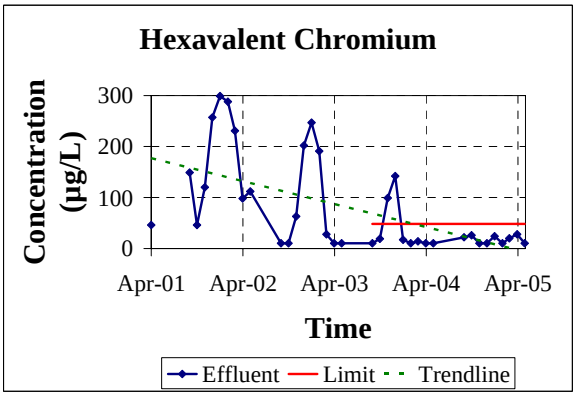

Figure 6 Effluent concentration at Outfall 001, Apr. 2001-May 2005

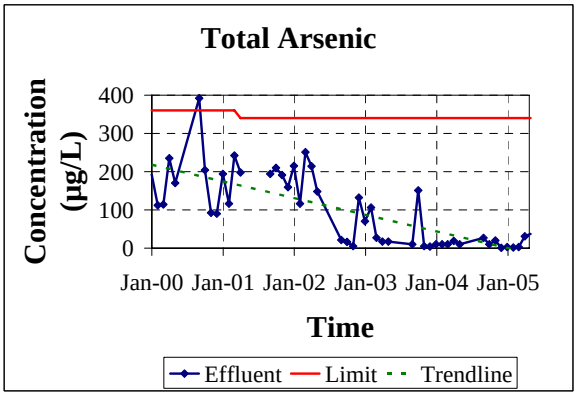

Figure 7 Effluent concentration at Outfall 001, Jan. 2000-May 2005

2. Allweather requested an extension of the interim maximum daily copper limit of 160 µg/L. The limit is lower that the previous interim copper limit of 280 µg/L. If the limit was calculated based on performance, for the last 12 months, November 2004-October 2005, the maximum daily effluent limit would be 260 µg/L and the average monthly effluent limit would be 180 µg/L. Said limits were calculated with the assumption that one sample is taken during the month. However, the limit is higher that the final water-quality-based copper limit of 36 µg/L, triggered on November 1, 2005.

3. The Department has tentatively determined, based on the above information and analyses, that the requested interim copper limit would allow additional time to develop and implement further modifications of or expansions to the existing treatment system with lower probability for the permit violations. The Department proposes to set the

interim copper limit at 160 µg/L (maximum daily) until expiration day of the permit, March 1, 2008. Due to the described above wood preservative change, the increase of the copper limit complies with federal regulations, 40 CFR 122.44(l):

> *(i) Exceptions—A permit with respect to which paragraph (l)(2) of this section applies may be renewed, reissued, or modified to contain a less stringent effluent limitation applicable to a pollutant, if—*
>
> *(A) Material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation;*

Compliance with the final limit of 36 µg/L will be effective in the future permit on July 1, 2009.

4. The Department has tentatively determined to allow additional time to prepare an engineering report for the electrocoagulation treatment system. The proposed deadline will be set in the future permit for January 1, 2009. Modified permit requires annual progress report, 40 CFR 122.47.

Outfall 002

Allweather has not been able to comply with the final water-quality-based copper limit of 81 µg/L since the permit was issued on March 1, 2003, Figure 8. Since March 2003, Allweather violated the final water-quality-based copper limit of 81 µg/L six times.

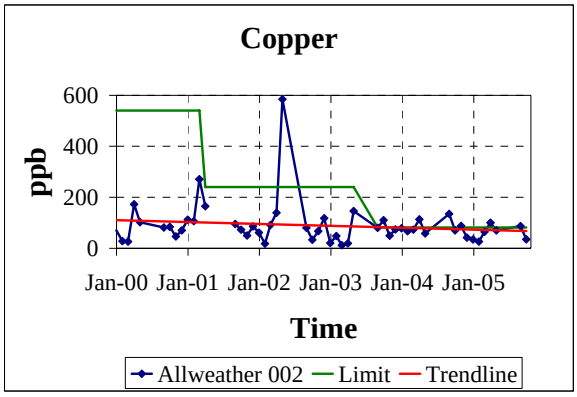

Figure 8 Effluent concentration at Outfall 002, Jan. 2000-October 2005

1. Allweather requested setting an interim maximum daily copper limit at 160 µg/L. The limit is lower than the previous interim copper limit of 240 µg/L that was in effect before the current permit was issued. If the limit was calculated based on performance, for the

last 12 months, November 2004-October 2005, the maximum daily effluent limit would be 170 µg/L and the average monthly effluent limit would be 120 µg/L. Said limits were calculated with the assumption that one sample is taken during the month. Compliance with the final limit of 81 µg/L will be effective in the future permit on July 1, 2009.

2. The Department has tentatively determined, based on the above information and analyses that the requested interim copper limit would allow additional time to comply with the final water-quality-based copper limit of 81 µg/L. The Department proposes to set the interim copper limit at 160 µg/L (maximum daily) until expiration day of the permit, March 1, 2008. Due to the described above wood preservative change, the increase of the copper limit complies with federal regulations, 40 CFR 122.44(l), quoted above.

Outfall 001 & 002

Allweather characterized effluent for acute toxicity. The results of the characterization triggered an effluent limit for acute toxicity. The Department has tentatively determined to remove the limit from the permit. This determination complies with federal regulations, 40 CFR 122.44, because of the described above wood preservative change. Further, the Department has tentatively determined to delay any future effluent characterization for acute toxicity until Allweather can achieve compliance with the water quality-based effluent limit for copper. The Department's tentative determination is in accordance with state regulations, WAC 173-205-030(4):

> *The department may delay effluent characterization for whole effluent toxicity for existing facilities that are under a compliance schedule in a permit, administrative order, or other legally enforceable mechanism to implement technology-based controls or to achieve compliance with water quality-based effluent limits.*

The existing effluent characterization was based on testing of samples without hardness adjustment. The toxicity of copper would be exaggerated in WET tests relative to its toxicity in receiving water due to hardness differences between the sample and ambient water. The latest version of Ecology publication WQ-R-95-80 (Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria) added a procedure to adjusting the hardness of low hardness samples to match that of the receiving water. This procedure will be used in all subsequent effluent characterization in order to better predict toxicity in excess of state water quality standards.